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(71) Applicant (for all designated States except US): THE UNIVERSITY OF QUEENSLAND [AU/AU]; QLD 4072 (AU).

(72) Inventor; and
(75) Inventor/Applicant (for US only): GATES, Kevin, E. [US/AU]; Unit 1, 24 Oxford Terrace, Taringa, QLD 4068 (AU).
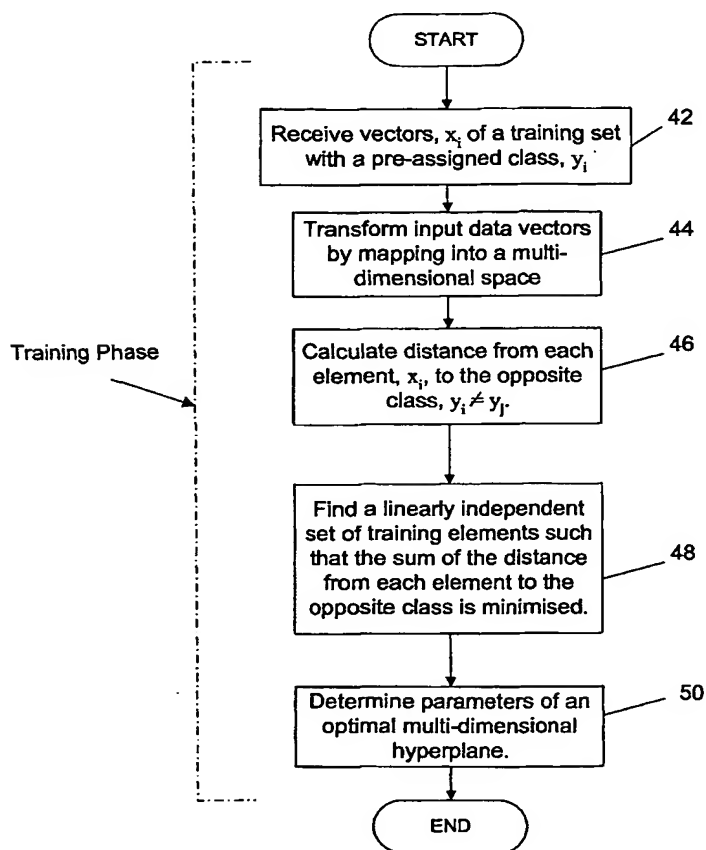
(74) Agent: EAGAR & BUCK PATENT AND TRADE MARK ATTORNEYS; PO Box 509, Spring Hill, QLD 4004 (AU).

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(54) Title: IMPROVED SUPPORT VECTOR MACHINE

(57) Abstract: A method for operating a computer as a support vector machine (SVM) in order to define a decision surface separating two opposing classes of a training set of vectors. The method involves associating a distance parameter with each vector of the SVM's training set. The distance parameter indicates a distance from its associated vector, being in a first class, to the opposite class. A number of approaches to calculating distance parameters are provided. For example, a distance parameter may be calculated as the average of the distances from its associated vector to each of the vectors in the opposite class. The method further involves determining a linearly independent set of support vectors from the training set such that the sum of the distances associated with the linearly independent support vectors is minimised.

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